

REMARKS

Claims 1-37 and 42 are pending. By this Amendment, the specification has been amended to address minor editorial issues, claims 1, 27, 36 and 37 are amended and claim 42 is added. Also, claims 38-41 have been canceled without prejudice to or disclaimer of the subject matter contained therein.

An Election of Species was required in this application. Accordingly, Applicant elected Figure 1, claims 1, 2, 7-19 and 21-37 and submitted that at least claims 1, 11, 12, 22-24 and 37 were generic to all species. By this Amendment, Applicant canceled claims 38-41. Applicant also adds claim 42 and asserts that claim 42 is supported by Fig. 1. Applicant also retains claims 3-6 and 20 as these claims remain generic to claim 1. Applicant thus requests rejoinder of claims 3-6 and 20 if claim 1 is found to be allowable because claims 3-6 and 20 depend from claim 1 and would thus be allowable for the same reasons that claim 1 is allowable.

However, Applicant respectfully traverses the Examiner's assertion that claims 14 and 23 do not read on elected Figure 1. Claim 14 requires that the cut-off valve 120 be disposed in each of at least one 110 of the two separate fluid passages 110, 111. Applicant asserts that this feature is supported by elected Figure 1. With regard to claims 23, Applicant asserts that Figure 1 also discloses a power-operated assisting-piston drive device 192, 196 which is operable to move the assisting piston 162, 164 relative to the housing 160. As such, Applicant asserts that claims 14 and 23 are both supported by elected Fig. 1 and that these claims should be examined.

The specification was objected to for failing to provide proper antecedent basis for the features recited in Applicant's claims 27-29, 31 and 33. The objection is respectfully traversed.

Applicant asserts that their specification discloses a distribution ratio control portion that includes at least one of the two pressure-increasing linear valves 200, 204 and a portion of the brake control device 300 which is assigned to control the valve 200 and/or valve 204. The description is provided in paragraphs 214-216, and in particular, the last seven lines of

paragraph 216 of Applicant's specification, for example. As such, Applicant asserts that the specification provides proper antecedent basis for the distribution ratio control portion as recited in claims 27-29, 31 and 33. It is respectfully requested the objection be withdrawn.

Claims 27 and 28 were rejected under 35 U.S.C. §112, second paragraph. By this Amendment, Applicant amends claim 27 responsive to the rejection by clarifying that the housing is the housing of the assisting cylinder. It is respectfully requested the rejection be withdrawn. OK

Claims 1, 2, 7, 8, 13, 16, 18, 19, 22 and 24 were rejected under 35 U.S.C. §102(b) over DE 19716404 (DE '404). The rejection is respectfully traversed.

Applicant asserts that DE '404 fails to disclose Applicant's braking system with a valve device having a first state and a second state as recited in claim 1. DE '404 discloses a braking system with a master cylinder having two pressurizing chambers 4, 6 partially defined by respective pistons 4A, 6A (Fig. 1). The master cylinder also includes a brake cylinder 3 in communication with the chamber 4, a pump 10 which is connected to both the brake cylinder 3 and the chamber 6 with the pump 10 operated during an operation of the brake operating member 2 and a valve device 12 that is connected in parallel with the pump 10. When the brake operating member 2 is operating, the valve device 12 is initially placed at a first position 12.1 which allows pressurized fluid to be delivered from the pressurizing chamber 6 to the brake cylinder 3. When the fluid pressure generated in the chamber 6 has exceeded a predetermined threshold value, the fluid pressurized by the pump 10, controlled according to an operating state of the brake operating member 2, is delivered to the brake cylinder 3.

With this arrangement, the fluid pressurized by the advancing movements of the piston 4a, 6a in DE'404 is delivered from the two corresponding pressurizing chambers 4, 6 to the brake cylinder 3 when the fluid pressure in the chamber 6 is lower than a predetermined threshold value. As such, DE'404 discloses Applicant's valve device having a first state

However, DE'404 fails to disclose Applicant's valve device having a second state because the fluid pressurized from both or none of the chambers 4, 6, and not only one of the chambers 4, 6, is delivered to the brake cylinder 3 in DE'404. In particular, after the fluid pressure in the chamber 6 has exceeded the threshold value, the valve device 12 is brought to a second position 12.2 in which the chamber 6 is isolated from the brake cylinder 3, and the fluid pressurized by the pump 10 is delivered to the brake cylinder 3. In the second position, therefore, only the fluid pressurized by the pump 10 is delivered to the brake cylinder 3. Neither the fluid pressurized in the pressurizing chamber 6, nor the fluid pressurized in the pressurizing chamber 4 is delivered to the brake cylinder 3. That is, DE'404 fails to disclose Applicant's second state as recited in claim 1. 7-13

In addition, claims 2, 7, 8, 13, 16, 18, 19, 22 and 24 recite additional features of the invention and are also believed to be allowable at least for the reasons discussed above with respect to claim 1 and for the additional features recited therein. It is respectfully requested that the rejection be withdrawn. 27

Claims 1, 2, 7-13 and 37 were rejected under 35 U.S.C. §102(b) over Enomoto et al. (Enomoto), U.S. Patent No. 5,882,093. The rejection is respectfully traversed.

Applicant asserts that Enomoto fails to disclose a braking system with a master cylinder having at least two pressurizing chambers as recited in Applicant's claim 1. Enomoto discloses a braking system with a master cylinder MC serving as a static pressure generator and a regulator RG serving as a dynamic pressure generator (Fig. 2 and col. 6, lines 4-7). rk

With regard to the master cylinder, Applicant traverses the Examiner's assertion that it is inherent that the master cylinder has at least two pressurizing pistons cooperating with the housing to define at least two pressurizing chambers. Applicant first asserts that Enomoto fails to show the construction of their master cylinder MC. Secondly, Enomoto discloses that the master cylinder pressure is used for the front circuit, including front wheel brakes cylinders Wfr,

Wfl, while the regulator pressure is used for the rear circuit including rear wheel brake cylinders Wrr, Wrl (Fig. 2 and col. 9, lines 31-36). Although Enomoto may have a single pressurizing chamber connected to the front wheel cylinders through the changeover Ref and transmitting device PT, Applicant asserts that Enomoto fails to disclose that their master cylinder MC has at least two pressurizing chambers.

As such, because Enomoto fails to disclose their master cylinder MC as having two pressurizing chambers, Enomoto also fails to disclose a valve device having a first state as recited in Applicant's claim 1, in which the pressurized fluid is delivered from two pressurizing chambers of the master cylinder MC to the brake cylinder Wfr, Wfl. The changeover device Ref, connected to the master cylinder MC and having a single pressurizing chamber, is not a valve device as recited in Applicant's claim 1.

Applicants also assert that the valve device SVp of Enomoto's Fig. 2 does not correspond to Applicant's valve device as recited in claim 1 because the valve device SVp is not connected to the master cylinder MC. Applicant also notes that Enomoto's regulator RG, to which the valve device SVp is connected, receives pressurized fluid from an auxiliary power source AS including a pump HP, an accumulator type Acc and an electric motor PM, but does not receive any pressurized fluid from the master cylinder MC. As such, Applicant asserts that Enomoto also fails to disclose all of the features recited in Applicant's claim 1.

In addition, claims 2 and 7-13 recite additional features of the invention and are also believed to be allowable at least for the reasons discussed above with respect to claim 1 and for the additional reasons recited therein.

With regard to claim 37, Applicant asserts that Enomoto fails to disclose a braking system with a simulator control valve as recited in Applicant's claim 37. In Enomoto, the solenoid valve SVf of the changeover device REf is initially held in a closed state (step 210 of Fig. 4b ad col. 11, lines 9-16) when the front wheels FL, FR are braked by regenerative braking

by electric motor EM. As such, the fluid pressurized by the master cylinder MC is absorbed by the stroke simulator SM. In other words, the solenoid valve SVf permits a flow of the fluid from the master cylinder MC into the stroke simulator SM when the solenoid valve SVf is placed in the open position.

Applicant asserts that this is contrary to the simulator control valve as recited in claim 37. In Enomoto, they fail to disclose any simulator control device operable to control the stroke simulator such that the amount of a flow of the fluid from the master cylinder MC into the stroke simulator SM is restricted. As such, Applicant asserts that Enomoto also fails to disclose the features recited in claim 37.

It is respectfully requested that the rejection be withdrawn.

Claim 36 was rejected under 35 U.S.C. §103(a) over Enomoto in view of Sakai et al. (Sakai), U.S. Patent No. 6,007,164. The rejection is respectfully traversed.

The combination of Enomoto and Sakai fails to disclose or suggest a braking system with a braking characteristic control device operable to control at least a pressure of the fluid in the rear pressure chamber of the master cylinder or the diagnosing device as recited in Applicant's claim 37.

As discussed above, Enomoto merely refers to the master cylinder MC and never provides an indication or suggestion that the master cylinder MC has a rear pressure chamber on the rear side of the pressurizing piston. Accordingly, Enomoto also fails to disclose the diagnosing device as recited in claim 37.

Sakai also fails to teach a master cylinder having a pressurizing chamber and a rear pressure chamber on respective front and rear sides of a pressurizing piston. Namely, Sakai fails to disclose a master cylinder 14 that has a rear pressure chamber whose fluid pressure is controlled to control the fluid pressure in the pressurizing chamber on the front side of the pressurizing piston.


As such, Applicant asserts that the combination of Enomoto and Sakai fails to disclose or suggest all the features recited in Applicant's claim 36. Although Sakai does disclose a diagnosis on the basis of a relationship between the master cylinder pressure $P_{m/c}$ (pressure in the in the pressurizing chamber of master cylinder) and operating force P_F of the brake pedal 12 (step 208, Fig. 2, col. 11, line 51 - col. 12, line 5), this diagnosis is not affected in a braking system wherein the master cylinder has a rear pressure chamber whose fluid pressure is controlled, as well as a pressurizing chamber whose fluid pressure is controlled as a result of a control of the fluid pressure in the rear pressure chamber. It is respectfully requested the rejection be withdrawn.

Applicant appreciates the allowance of claims 25, 26 and 29-35 and the indication of allowability of claims 21, 27 and 28. Applicant also notes that neither an objection or rejection was made to claims 15 and 17. Applicant thus assumes that claims 15 and 17 are also allowable. However, for the reasons discussed above, Applicant requests that all of claims 1-37 and 42 are allowable.

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,



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